



4-3

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

***Attorney Docket. No. 041082-0113***

Applicant: Aser ROTHSTEIN *et al.*

Title: SELF-ALIGNING PEPTIDES MODELED ON HUMAN  
ELASTIN AND OTHER FIBROUS PROTEINS

Application No.: 09/964,662

Filing Date: 09/28/2001

Examiner: Unassigned

Art Unit: Unassigned

**STATEMENT TO SUPPORT FILING AND SUBMISSION  
IN ACCORDANCE WITH 37 C.F.R. 1.821-1.825**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

In connection with a Sequence Listing submitted concurrently herewith, the undersigned Hereby states that:

1. the submission, filed herewith in accordance with 37 C.F.R. 1.821(g), does not include new matter;
2. the content of the attached paper copy and the attached computer readable copy of the Sequence Listing, submitted in accordance with 37 C.F.R. 1.821(c) and (3), respectively, are the same; and
3. all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United

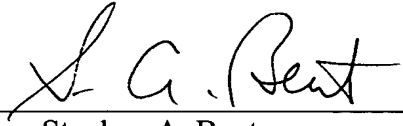
States Code and that such willful false statements may jeopardize the validity of the application or any patent resulting therefrom.

Respectfully submitted,

Date 17 December 2001

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#3



SEQUENCE LISTING

<110> ROTHSTEIN, ASER  
KEELEY, FRED  
ROTHSTEIN, STEVEN

<120> SELF-ALIGNING PEPTIDES MODELED ON HUMAN ELASTIN  
AND OTHER FIBROUS PROTEINS

<130> 041082/0110

<140> 09/340,736  
<141> 1999-06-29

<150> 08/911,364  
<151> 1997-08-07

<150> 60/023,552  
<151> 1996-08-07

<160> 11

<170> PatentIn Ver. 2.1

<210> 1  
<211> 731  
<212> PRT  
<213> Homo sapiens

<400> 1

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Tyr	Pro	Gly	Ala	Gly	Leu	Gly	Ala	Leu	Gly	Gly	Gly	Ala	Leu	Gly	Pro
			20					25						30	
Gly	Gly	Lys	Pro	Leu	Lys	Pro	Val	Pro	Gly	Gly	Leu	Ala	Gly	Ala	Gly
		35					40					45			
Leu	Gly	Ala	Gly	Leu	Gly	Ala	Phe	Pro	Ala	Val	Thr	Phe	Pro	Gly	Ala
	50					55					60				
Leu	Val	Pro	Gly	Gly	Val	Ala	Asp	Ala	Ala	Ala	Tyr	Lys	Ala	Ala	
	65				70				75					80	
Lys	Ala	Gly	Ala	Gly	Leu	Gly	Gly	Val	Pro	Gly	Val	Gly	Gly	Leu	Gly
				85					90					95	
Val	Ser	Ala	Gly	Ala	Val	Val	Pro	Gln	Pro	Gly	Ala	Gly	Val	Lys	Pro
			100					105					110		
Gly	Lys	Val	Pro	Gly	Val	Gly	Leu	Pro	Gly	Val	Tyr	Pro	Gly	Gly	Val
		115					120					125			
Leu	Pro	Gly	Ala	Arg	Phe	Pro	Gly	Val	Gly	Val	Leu	Pro	Gly	Val	Pro
	130						135					140			

Thr Gly Ala Gly Val Lys Pro Lys Ala Pro Gly Val Gly Gly Ala Phe  
 145 150 155 160  
 Ala Gly Ile Pro Gly Val Gly Pro Phe Gly Gly Pro Gln Pro Gly Val  
 165 170 175  
 Pro Leu Gly Tyr Pro Ile Lys Ala Pro Lys Leu Pro Gly Gly Tyr Gly  
 180 185 190  
 Leu Pro Tyr Thr Thr Gly Lys Leu Pro Tyr Gly Tyr Gly Pro Gly Gly  
 195 200 205  
 Val Ala Gly Ala Ala Gly Lys Ala Gly Tyr Pro Thr Gly Thr Gly Val  
 210 215 220  
 Gly Pro Gln Ala Ala Ala Ala Ala Ala Lys Ala Ala Ala Lys Phe  
 225 230 235 240  
 Gly Ala Gly Ala Ala Gly Val Leu Pro Gly Val Gly Gly Ala Gly Val  
 245 250 255  
 Pro Gly Val Pro Gly Ala Ile Pro Gly Ile Gly Gly Ile Ala Gly Val  
 260 265 270  
 Gly Thr Pro Ala Ala Ala Ala Ala Ala Ala Ala Lys Ala Ala  
 275 280 285  
 Lys Tyr Gly Ala Ala Ala Gly Leu Val Pro Gly Gly Pro Gly Phe Gly  
 290 295 300  
 Pro Gly Val Val Gly Val Pro Gly Ala Gly Val Pro Gly Val Gly Val  
 305 310 315 320  
 Pro Gly Ala Gly Ile Pro Val Val Pro Gly Ala Gly Ile Pro Gly Ala  
 325 330 335  
 Ala Val Pro Gly Val Val Ser Pro Glu Ala Ala Ala Lys Ala Ala Ala  
 340 345 350  
 Lys Ala Ala Lys Tyr Gly Ala Arg Pro Gly Val Gly Val Gly Gly Ile  
 355 360 365  
 Pro Thr Tyr Gly Val Gly Ala Gly Gly Phe Pro Gly Phe Gly Val Gly  
 370 375 380  
 Val Gly Gly Ile Pro Gly Val Ala Gly Val Pro Gly Val Gly Gly Val  
 385 390 395 400  
 Pro Gly Val Gly Gly Val Pro Gly Val Gly Ile Ser Pro Glu Ala Gln  
 405 410 415  
 Ala Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Val Gly Thr Pro Ala  
 420 425 430  
 Ala Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala Gln Phe Gly Leu Val  
 435 440 445

Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly  
 450 455 460  
 Val Ala Pro Gly Val Gly Leu Ala Pro Gly Val Gly Val Ala Pro Gly  
 465 470 475 480  
 Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Ala Ile Gly Pro Gly  
 485 490 495  
 Gly Val Ala Ala Ala Lys Ser Ala Ala Lys Val Ala Ala Lys Ala  
 500 505 510  
 Gln Leu Arg Ala Ala Ala Gly Leu Gly Ala Gly Ile Pro Gly Leu Gly  
 515 520 525  
 Val Gly Val Gly Val Pro Gly Leu Gly Val Gly Ala Gly Val Pro Gly  
 530 535 540  
 Leu Gly Val Gly Ala Gly Val Pro Gly Phe Gly Ala Gly Ala Asp Glu  
 545 550 555 560  
 Gly Val Arg Arg Ser Leu Ser Pro Glu Leu Arg Glu Gly Asp Pro Ser  
 565 570 575  
 Ser Ser Gln His Leu Pro Ser Thr Pro Ser Ser Pro Arg Val Pro Gly  
 580 585 590  
 Ala Leu Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Val Pro Gly  
 595 600 605  
 Val Leu Gly Gly Leu Gly Ala Leu Gly Gly Val Gly Ile Pro Gly Gly  
 610 615 620  
 Val Val Gly Ala Gly Pro Ala Ala Ala Ala Ala Ala Lys Ala Ala  
 625 630 635 640  
 Ala Lys Ala Ala Gln Phe Gly Leu Val Gly Ala Ala Gly Leu Gly Gly  
 645 650 655  
 Leu Gly Val Gly Gly Leu Gly Val Pro Gly Val Gly Gly Leu Gly Gly  
 660 665 670  
 Ile Pro Pro Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Gly  
 675 680 685  
 Leu Gly Gly Val Leu Gly Gly Ala Gly Gln Phe Pro Leu Gly Gly Val  
 690 695 700  
 Ala Ala Arg Pro Gly Phe Gly Leu Ser Pro Ile Phe Pro Gly Gly Ala  
 705 710 715 720  
 Cys Leu Gly Lys Ala Cys Gly Arg Lys Arg Lys  
 725 730

&lt;210&gt; 2

&lt;211&gt; 200

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
MFU-1 polypeptide

<400> 2

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Val Pro Gly Val Gly Gly Val Pro Gly Val Gly Gly Val Pro Gly Val
          20           25           30
Gly Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala Ala Lys Ala Ala Lys
          35           40           45
Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Ala Lys Ala Ala Ala Lys
          50           55           60
Ala Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro Gly Val
          65           70           75           80
Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu Ala Pro
          85           90           95
Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val
          100          105          110
Ala Pro Ala Ile Gly Pro Glu Ala Gln Ala Ala Ala Ala Ala Lys Ala
          115          120          125
Ala Lys Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Ala Lys Ala Ala
          130          135          140
Ala Lys Ala Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro
          145          150          155          160
Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu
          165          170          175
Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val
          180          185          190
Gly Val Ala Pro Ala Ile Gly Pro
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<210> 3

<211> 4

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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<210> 4  
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<223> Description of Artificial Sequence: Synthetic peptide

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1 5

<210> 5  
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<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

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1 5

<210> 6  
<211> 5  
<212> PRT  
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<400> 6  
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1 5

<210> 7  
<211> 4  
<212> PRT  
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<220>  
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 20 25 30

<210> 9  
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 <223> Description of Artificial Sequence: Synthetic  
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 20 25 30  
 Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala Lys Ala Ala Lys Tyr  
 35 40 45  
 Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala Ala Lys Ala  
 50 55 60  
 Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro Gly Val Gly  
 65 70 75 80  
 Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu Ala Pro Gly  
 85 90 95  
 Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala  
 100 105 110  
 Pro Ala Ile Gly Pro  
 115

<210> 10  
 <211> 118  
 <212> PRT  
 <213> Artificial Sequence



&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
MFU-4 polypeptide

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 1 5 10 15  
 Val Pro Gly Val Gly Gly Val Pro Gly Val Gly Gly Val Pro Gly Val  
 20 25 30  
 Gly Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala Lys Ala Ala Lys  
 35 40 45  
 Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala Ala Ala Lys  
 50 55 60  
 Ala Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro Gly Val  
 65 70 75 80  
 Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu Ala Pro  
 85 90 95  
 Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val  
 100 105 110  
 Ala Pro Ala Ile Gly Pro  
 115

&lt;210&gt; 11

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
MFU-5 polypeptide

&lt;400&gt; 11

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 Pro Gly Val Gly Gly Val Pro Gly Val Gly Gly Val Pro Gly Val Gly  
 20 25 30  
 Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala Lys Ala Ala Lys Tyr  
 35 40 45  
 Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala Ala Ala Lys Ala  
 50 55 60  
 Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro Gly Val Gly  
 65 70 75 80  
 Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu Ala Pro Gly  
 85 90 95

Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala	100	105	110
Pro Ala Ile Gly Pro Glu Ala Gln Ala Ala Ala Ala Lys Ala Ala	115	120	125
Lys Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala Ala Ala	130	135	140
Lys Ala Ala Gln Phe Gly Leu Val Pro Gly Val Gly Val Ala Pro Gly	145	150	155
Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly Leu Ala	165	170	175
Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly	180	185	190
Val Ala Pro Ala Ile Gly Pro	195		